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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/567,261

02/06/2006

Dietmar Baumann

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EXAMINER

RODRIGUEZ, PAMELA

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/567,261	<b>Applicant(s)</b> BAUMANN ET AL.	
	<b>Examiner</b> Pam Rodriguez	<b>Art Unit</b> 3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 14-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/06/06 &amp; 05/19/08</u> .                                 | 6) <input type="checkbox"/> Other: ____.                          |

## **DETAILED ACTION**

### ***Specification***

1. The abstract of the disclosure is objected to because in line 1 the word “means” is used and in line 4 the term “contate” should read –contrate--, as the examiner believes this is the proper name for the type of gearing used in applicant’s invention. Correction is required. See MPEP § 608.01(b).
2. The disclosure is objected to because of the following informalities: in paragraph 0026, element 58 is referred to as an imaginary triangle, while in paragraph 0029, element 58 is referred to as a plate, applicant is not permitted to designate two separate parts of his invention with the same element numeral designation, on page 13, paragraph 0034, the term “shaft 74” should read –shaft 76—to be consistent with the drawings and the previous lines of the specification, and in paragraph 0039 the term “contate” should read –contrate--, as the examiner believes this is the proper name for the type of gearing disclosed in applicant’s invention .

Appropriate correction is required.

### ***Claim Objections***

3. Claim 23 is objected to because of the following informalities: in line 2 of the claim, the term “contate” should read –contrate--, as the examiner believes this is the proper name for the type of gearing disclosed in applicant’s invention .

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 14 – 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 14, the parenthetical phrase "(feed motion)" in line 10 renders the claim indefinite because it is unclear whether the limitation inside the parentheses is part of the claimed invention. See MPEP § 2173.05(d).

Claims 15-26 are rejected merely due to their dependency from Claim 14.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

Art Unit: 3657

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 14-22 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,651,897 to Hahn.

Regarding Claim 14, Hahn discloses a mechanical partial-lining disk brake 10 with self-boosting (see Figures 1-3 and 6) having an actuating device 36, having a friction brake lining 32/34, which for braking can be pressed by the actuating device 36 against a brake disk 12, and having a self-booster 28/30/40/68/70/72, which converts a frictional force, exerted by the brake disk 12 on the friction brake lining 32/34 when the friction brake lining is pressed against the rotating brake disk 12, into a contact pressure which presses the friction brake lining 32/34 against the brake disk 12, the improvement wherein the self-booster 28/30/40/68/70/72 has a ramp mechanism 28/30, and wherein the ramps 70/72 of the ramp mechanism have a helical course that is concentric to one another and at least approximately concentric to an axis of rotation of the brake disk 12 (see Figures 1, 3, and 6) and guide the friction brake lining 32/34, for pressing against the brake disk 12, both transversely to the brake disk 12 and approximately in a circular arc in the circumferential direction to the brake disk 12 (see Figures 3 and 6).

However, Hahn does not disclose an electromechanical partial-lining brake assembly.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the brake assembly of Hahn to include an electrical, as well as, a mechanical actuating device as an alternate means of actuating

Art Unit: 3657

the brake. As long as the caliper is activated to apply the brakes, the means used to do so is arbitrary.

Regarding Claim 15, Hahn further discloses that the ramp mechanism 28/30 comprises roller bodies 40/68 and wherein the ramps 70/72 guide the roller bodies 40/68 along helical paths having the same slope (see Figures 3 and 6).

Regarding Claim 16, see roller bodies 40/68/68 which are disposed at corners of an imaginary triangle (see Figures 3 and 6 where the balls form corners of an imaginary triangle, at least to the same extent as applicant's).

Regarding Claim 17, see Figures 3 and 6, wherein at least to the same extent as applicant's, this limitation is met.

Regarding Claim 18, see ball seat 52, readable as a retainer, which keeps the roller bodies in their spacing from and in their position relative to one another.

Regarding Claim 19, see frame 44/26/24, on which the friction brake lining 32/34 is braced on being pressed against the brake disk 12, and which is located approximately at the same level as a center point of the area of the friction brake lining 32/34 (at least to the same extent as applicant's as shown in Figure 2 of the reference).

Regarding Claim 20, see at least the encapsulation of balls 40 and 68.

Regarding Claim 21, see floating caliper 10 (see column 2 lines 17-20), in which the friction brake lining 32/34 rests and which is guided displaceably by a caliper guide 20/22 transversely to the brake disk 12, and wherein the caliper guide 20/22 comprises an encapsulation (i.e., an encapsulation of bolts passing through holes 22 as discussed in column 2 lines 17-20).

Regarding Claim 22, see encapsulation 24/44 for the self-booster 28/30/40/68/70/72.

Regarding Claim 24, Hahn discloses most all the features of the instant invention as applied above and further including a brake caliper 10 comprising a bolt (i.e., the bolts for holes 22), with which it is guided displaceably transversely to the brake disk 12 and wherein the bolt is disposed approximately in an imaginary plane with the brake disk 12 (see Figure 1).

However, Hahn does not disclose whether the bolts comprise slide bearings.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated slide bearings onto the bolts of Hahn in order to ensure appropriate operation of the caliper. Slide bearings would allow the caliper housing to better slide along the bolts to ensure proper braking takes place.

Regarding Claim 25, Hahn further discloses that the caliper 10 comprises a brace (readable as either element 20 or bolts 26) against tilting, for relieving the slide bearing. (Note: both components 20 or 26 are capable of acting as braces for tilting).

Regarding Claim 26, see actuating device 36 which engages the ramp mechanism 28/30 with a long lever arm 50 radially relative to the brake disk 12 outside the ramps 70/72 (see Figure 2).

9. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,651,897 to Hahn in view of U.S. Patent No. 6,427,935 to Fujii et al.

Regarding Claim 23, Hahn does not disclose that the actuating device comprises a contrate gear mechanism for displacing the ramps of the ramp mechanism.

Fujii et al are relied upon merely for their teachings of a type of braking device with an actuating device 112 comprising a contrate gear mechanism 110 for displacing one mechanism relative to another.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated a contrate gear mechanism into the ramps of the ramp mechanism of Hahn as an alternate means of actuating the brake. As long as the ramps can be displaced relative to one another to actuate the brake, the means used to do so is arbitrary.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 1,696,879 to Chase, U.S. Patent No. 3,185,258 to Douglas, and PG Publication No. 2007/0151815 to Baumann et al all disclose braking assemblies similar to applicant's.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pam Rodriguez whose telephone number is 571-272-7122. The examiner can normally be reached on Mondays 5:30 AM - 4 PM and Tuesdays 8 AM - 2 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rob Siconolfi can be reached on 571-272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 3657

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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